

Claims of the Application

1. (Presently Amended) An apparatus for insert molding, comprising:
  - an upper mold half;
  - a lower mold half for mating with said upper mold half to provide a molded part cavity therein;
  - at least one of said lower mold half and said upper mold half including:
    - an elevator opening[[:]] having an a peripheral inwardly directed lip located at a cavity side of said elevator opening; and
    - an elevator mechanism including:
      - a lifter for supporting an insert to be secured to a molded article during a molding operation, and
      - a lifting arrangement for raising and lowering said lifter through said elevator opening such that a an entire peripheral edge of the insert supported on said lifter is clamped between said lifter and said lip when said lifting arrangement moves said lifter adjacent said inwardly directed lip.
2. (Original) The apparatus according to claim 1, wherein said lifting arrangement includes:
  - a base positioned outside a respective said mold half on a side opposite said molded part cavity; and
  - a cylinder mounted to said base and including a movable piston rod connected with said lifter for raising and lowering said lifter.
3. (Original) The apparatus according to claim 2, wherein said base includes a recess for mounting said cylinder.
4. (Original) The apparatus according to claim 1, further comprising a retainer removably connected to said respective mold half within said elevator opening, said

retainer including a dam flush with and removable from an inner wall defining said elevator opening, and said retainer further including said inwardly extending lip connected to an end of said dam.

5. (Original) The apparatus according to claim 4, wherein said retainer further includes an outwardly extending connector connected with an opposite end of said dam and removably secured to a surface of the respective mold half.

6. (Original) The apparatus according to claim 1, wherein said lifting arrangement includes:

a first slide plate having a first inclined cam surface, said lifter being connected to said first slide plate;

a second slide plate having a second inclined cam surface in contact with said first inclined cam surface; and

a moving arrangement for sliding said second slide plate relative to said first slide plate in order to raise and lower said first slide plate and said lifter.

7. (Original) The apparatus according to claim 1, which is adapted for molding shoe insoles and wherein:

said lower mold half includes:

two lower mold cavities corresponding to left and right insoles to be molded;

one said elevator opening in a lower portion of each said lower mold cavity; and

one said inwardly directed lip at an upper portion of each said elevator opening;

said elevator mechanism includes two said lifters for supporting an insert in correspondence with each said lower mold cavity; and

said lifting arrangement raises and lowers said two lifters such that a peripheral edge of each insert supported on each said respective lifter is clamped between said lifter and the respective lip when said lifting arrangement raises said lifters.

Claims 8-16 are canceled.

17. (New) An apparatus for insert molding, comprising:

an upper mold half;

a lower mold half for mating with said upper mold half to provide a molded part cavity therein;

at least one of said lower mold half and said upper mold half including:

an elevator opening;

an inwardly directed lip at a cavity side of said elevator opening; and

an elevator mechanism including:

a lifter for supporting an insert to be secured to a molded article during a molding operation;

a lifting arrangement for raising and lowering said lifter through said elevator opening such that a peripheral edge of the insert supported on said lifter is clamped between said lifter and said lip when said lifting arrangement moves said lifter adjacent said inwardly directed lip; and

a retainer removably connected to said respective mold half within said elevator opening, said retainer including a dam flush with and removable from an inner wall defining said elevator opening, and said retainer further including said inwardly extending lip connected to an end of said dam.

18. (New) The apparatus according to claim 17, wherein said retainer further includes an outwardly extending connector connected with an opposite end of said dam and removably secured to a surface of the respective mold half.

19. (New) The apparatus according to claim 17, wherein said lifting arrangement includes:

a first slide plate having a first inclined cam surface, said lifter being connected to said first slide plate;

a second slide plate having a second inclined cam surface in contact with said first inclined cam surface; and

a moving arrangement for sliding said second slide plate relative to said first slide plate in order to raise and lower said first slide plate and said lifter.

20. (New) The apparatus according to claim 17, which is adapted for molding shoe insoles and wherein:

said lower mold half includes:

two lower mold cavities corresponding to left and right insoles to be molded;

one said elevator opening in a lower portion of each said lower mold cavity; and

one said inwardly directed lip at an upper portion of each said elevator opening;

said elevator mechanism includes two said lifters for supporting an insert in correspondence with each said lower mold cavity; and

said lifting arrangement raises and lowers said two lifters such that a peripheral edge of each insert supported on each said respective lifter is clamped between said lifter and the respective lip when said lifting arrangement raises said lifters.